

Applicant(s): Myeong-cheol Kim, *et al.*  
U.S. Serial No.: 09/731,385

### REMARKS

Claims 1-11, and 14-15 are pending in the present application. Claim 1 is amended above. No new matter is added by the claim amendments. Entry is respectfully requested.

Claims 1-2, 4-7, 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kondo *et al.* (U.S. Patent No. 5,075,762). Claims 1-8, 10 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen (U.S. Patent No. 6,472,261). Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo *et al.* or Nguyen. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo *et al.* or Nguyen in view of Huang (U.S. Patent No. 5,899,722). In view of the amendments to the claims and the following remarks, the rejections are respectfully traversed, and reconsideration of the rejections is requested.

The claims are amended to clarify the definition of the claimed first insulation layer of the present invention, and to more clearly distinguish Kondo *et al.*'s gate insulating film 4 and Nguyen's thermal oxide layer 22, both of which are cited by the Examiner as the applicants' claimed first insulation layer. The first insulation layer of the present invention fills a gap between adjacent conductive patterns, and has a planar top surface throughout the entire distance between adjacent conductive patterns. The claimed first insulation layer is formed between the conductive patterns laterally adjacent to and not underneath the conductive patterns. This structure is illustrated, for example, in figures 1-5 in which first insulation layer 8, 28, 50, 70, 90 fills a gap between conductive patterns comprised of the first conductive layer 4, 24, 44, 64 and mask layer 6, 26, 46, 66 on the substrate 2, 22, 42, 62 and has a top planar surface and is laterally adjacent to and not underneath the conductive patterns. This specific structure is now set forth in the amended claims.

Neither of the cited Kondo *et al.* and Nguyen patents teaches or suggests these features of the invention set forth in the amended claims. Kondo *et al.* and Nguyen fail to teach or suggest a first insulation layer which fills a gap between adjacent conductive patterns and has a planar top surface throughout the entire distance between adjacent conductive patterns and being laterally

Applicant(s): Myeong-cheol Kim, *et al.*  
U.S. Serial No.: 09/731,385

adjacent to and not underneath the conductive patterns, as claimed in amended independent claim 1.

Kondo *et al.*'s gate insulating film 4, which, according to the Office Action, is analogous to the first insulation layer of the present invention, is formed on the substrate 1 and below gate electrode 3 which, according to the Office Action, is analogous to the first conductive layer of the present invention, as shown in figure 4 of Kondo *et al.* Thus, the gate insulating film 4 of Kondo, *et al.* is formed underneath the gate electrode 3 and, therefore, does not meet the specific language of the amended claims. That is, Kondo *et al.* fail to teach or suggest a first insulation layer formed between conductive patterns, laterally adjacent to, but not underneath, the conductive patterns.

Hence, Kondo *et al.* fail to teach or suggest the invention set forth in the amended claims. Accordingly, it is believed that the claims are allowable over Kondo *et al.*, and reconsideration of the rejections of claims 1-2, 4-7, 10 and 15 under 35 U.S.C. 102(b) and the rejection of claim 11 under 35 U.S.C. 103(a) based on Kondo *et al.* is respectfully requested.

Nguyen's oxide layer 22, which, according to the Office Action, is analogous to the applicant's claimed first insulation layer, is a conformal oxide layer having an "L" shaped side view, as shown in Figure 6 of Nguyen. It does not have a planar top surface extending the entire distance between conductive patterns, as claimed by the applicants. The applicants point out that the previously cited Chang, *et al.* patent also teaches a conformal layer 24, which was distinguished by the applicants' recitation in the claims of the first insulation layer having a planar top surface extending the entire distance between conductive patterns.

Hence, Nguyen also fails to teach or suggest the invention set forth in the amended claims. It is therefore believed that the amended claims are allowable over Nguyen. Accordingly, reconsideration of the rejections of claims 1-8, 10, and 15 under 35 U.S.C. 102(e) and the rejection of claim 11 under 35 U.S.C. 103(a) and the rejection of claim 9 under 35 U.S.C. 103(a) based on Nguyen is respectfully requested.

Huang also fails to teach or suggest the invention set forth in the amended claims. Specifically, Huang fails to teach or suggest the applicants' claimed first insulation layer having a

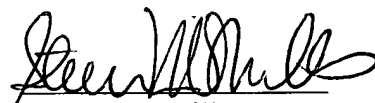
Applicant(s): Myeong-cheol Kim, *et al.*  
U.S. Serial No.: 09/731,385

planar top surface extending the entire distance between adjacent conductive patterns and being formed laterally adjacent to and not underneath the conductive patterns. Since none of the Kondo, *et al.*, Nguyen and Huang patents teaches or suggests these specific features of the invention now set forth in the amended claims, there is no combination of the references that would provide such teaching or suggestion. Accordingly, it is believed that the amended claims are allowable over the references, and reconsideration of the rejection of claim 14 under 35 U.S.C. § 103(a) based on Kondo, *et al.* or Nguyen taken with Huang is respectfully requested.

In view of the amendments to the claims and the foregoing remarks, it is believed that, upon entry of this Amendment, all claims pending in the application will be in condition for allowance. Therefore, it is requested that this Amendment be entered and that the case be allowed and passed to issue. If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

Date: August 26, 2003  
Mills & Onello, LLP  
Eleven Beacon Street, Suite 605  
Boston, MA 02108  
Telephone: (617) 994-4900  
Facsimile: (617) 742-7774

  
Steven M. Mills  
Registration Number 36,610  
Attorney for Applicants

J:\SAM\0164\amendmentafterfinal(RCE)2.wpd